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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,703	04/30/2001	Kenro Hama	018775-826	9401

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EXAMINER

MENBERU, BENIYAM

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/843,703	Applicant(s) HAMA ET AL	
	Examiner Beniyam Menberu	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Response to Arguments

1. Applicant's arguments, see pages 7-13 of the Remarks, filed March 25, 2005, with respect to the rejection(s) of claim(s) 1-3, 5-6, 8-9, 11, 14, and 17 under U.S. Patent No. 6631210 to Mutoh et al in view of U.S. Patent No. 6681040 to Arai have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 6219382 to Kikuchi et al.

Specification

2. The disclosure is objected to because of the following informalities:

The amended specification starting on page 5, line 14 of the Remark still contains error because when the conditions of equation 3 is satisfied, that implies that the pixel is NOT noise and when it is NOT satisfied, then the pixel is considered to be noise and should be deleted. Therefore page 5, line 14 should be changed to reflect this.

Drawings

3. The drawings are objected to because in the amended Figure 8, the "YES" and "NO" labels in step S1047 should be switched to be in accordance with the specification since when the conditions of equation 3 on page 5 of the Remarks are not ("NO" in S1047) satisfied it should go to S1048 to delete noise. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

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abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5, 8, 11, 14, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6219382 to Kikuchi et al.

Regarding claims 1, 5, 8, 11, 14, and 17 Kikuchi et al discloses an image processor, method, and program (column 6, lines 25-27) comprising:
a first decision controller, method and program , which decides whether input color data of a target pixel exist in first ranges (column 12, lines 46-51);
a second decision controller which decides whether differences between color data of the target pixel and those of pixels adjacent thereto exist in second ranges different from the first ranges (column 12, lines 51-55); and
a color decision controller which decides that the target pixel has a specified color when the first decision controller decides that the color data of the target pixel exist in the first ranges and the second decision controller decides that the differences exist in the second ranges (column 12, lines 54-58).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6219382 to Kikuchi et al in view of U.S. Patent No. 6631210 to Mutoh et al.

Regarding claims 2, 6, and 9, Kikuchi et al teaches all the limitations of claim 1, 5, and 8 respectively. However Kikuchi et al does not disclose an image processor, method, and program according to claim 1, wherein said second decision controller determines a maximum value among differences of color data between the target pixel and the adjacent pixels thereof and decides whether the maximum value exists in the second ranges.

Mutoh et al disclose an image processor, method, and program, wherein said second decision controller determines a maximum value among differences of color data between the target pixel and the adjacent pixels thereof and decides whether the maximum value exists in the second ranges (column 32, lines 24-32).

Kikuchi et al and Mutoh et al are combinable because they are in the similar problem area of color detection.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the maximum value detection of Mutoh et al with the system of Kikuchi et al to implement accurate color detection system.

The motivation to combine the reference is clear because Mutoh et al teaches that this maximum value can be used in detection of deep color area (column 32, lines 38-46).

Regarding claim 3, Kikuchi et al teaches all the limitations of claim 1. Further Mutoh et al disclose an image processor, further comprising an edge detector which calculates differences in a plurality of color component data of the color data between the target pixel and the adjacent pixels thereof in a direction and decides a position of an edge based on the differences (column 37, lines 14-28; column 47, lines 42-50).

8. Claims 4, 7, 10, 13, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6219382 to Kikuchi et al in view of U.S. Patent No. 6115494 to Sonoda et al.

Regarding claims 4, 7, 10, 13, 16, and 19, Kikuchi et al teach all the limitations of claims 1, 5, 8, 11, 14, and 17 respectively. However, Kikuchi et al does not disclose an image processor, program and method, further comprising:
an extraction controller which extracts an element having a predetermined shape based on the decision by said color decision controller; and
a pattern detector which detects a specified pattern the image data by discriminating whether the elements extracted by said extraction controller have a predetermined relationship between them.

Sonoda et al disclose an image processor, program and method, further comprising:
an extraction controller which extracts an element having a predetermined shape based on the decision by said color decision controller (Figure 5, reference 13a,b; column 10, lines 54-65); and

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a pattern detector which detects a specified pattern the image data by discriminating whether the elements extracted by said extraction controller have a predetermined relationship between them (Figure 5, reference 17; column 14, lines 30-44).

Kikuchi et al and Sonoda et al are combinable because they are in the similar problem area of color detection.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the extraction controller and the pattern detector taught by Sonoda et al into the system of Kikuchi et al to implement a pattern detection system.

The motivation to combine the reference is clear because for pattern detection it is necessary to implement the system of Sonoda et al in addition to the color detection system of Kikuchi et al.

9. Claims 12, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6219382 to Kikuchi et al in view of U.S. Patent No. 6151410 to Kuwata et al.

Regarding claims 12, 15, 18, Kikuchi et al teach all the limitations of claims 11, 14, and 17 respectively. However Kikuchi et al does not disclose an image processor, method, and program wherein the color data includes a plurality of color component data and said second decision controller calculates differences between the color component data of the target pixel and decides whether the differences exist in the second ranges.

Kuwata et al disclose an image processor, method, and program wherein

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the color data includes a plurality of color component data and said second decision controller calculates differences between the color component data of the target pixel and decides whether the differences exist in the second ranges (Figure 12, reference S302-S308; column 22, lines 14-36).

Kikuchi et al and Kuwata et al are combinable because they are in the similar problem area of color detection.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the color component difference calculation and comparison taught by Kuwata et al with the system of Kikuchi et al to implement an accurate color/pattern detection system.

The motivation to combine the reference is clear because Kuwata et al teaches that the method of calculating difference between color components can be used for thinning process (column 22, lines 21-23).

Other Prior Art Cited

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6453055 to Fukumura et al disclose identifying apparatus and method.

U.S. Patent No. 6701010 to Katsuyama disclose color image processor.

U.S. Patent No. 6389155 to Funayama et al disclose image processor.

U.S. Patent No. 5838310 to Uya disclose chroma-key generator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see [<http://pair-direct.uspto.gov/>](http://pair-direct.uspto.gov/).

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Beniyam Menberu

BM

06/25/2005

Kim Williams
KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER